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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,577	12/03/2003	Manabu Suzuki	1081.1186	3453

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EXAMINER

KIM, DAVID S

ART UNIT	PAPER NUMBER
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2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/725,577

Applicant(s)

SUZUKI ET AL.

Examiner

David S. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Drawings

1. Applicant's response to the objections to the drawings in the previous Office Action (mailed on 26 September 2006) is noted and appreciated. Applicant responded by amending Figs. 1 and 10. These drawings are approved. However, the drawings are still objected to because of the following:

In Figs. 3-9, Station B shows a "PostAMP Unit 120" where -- PreAMP Unit 120 -- may be intended.

In Fig. 7, process P16 shows "Request PreAmp_Module" where -- Request PostAmp_Module -- may be intended.

2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant's response to the objection to the abstract in the previous Office Action (mailed on 26 September 2006) is noted and appreciated. Applicant responded by amending the unduly long abstract, which overcomes the previous objection.

4. The disclosure is objected to because of the following informalities:

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On p. 19, line 2, "34-4" is used, but no such reference character exists in corresponding Fig. 8. Examiner respectfully suggests removal of this reference character.

On p. 25, line 4, "ASEREQ = 1" is used, but -- ASEREQ = 0 -- may be intended. That is, see Fig. 8, processes 34-1, 34-2, and 34-3.

Appropriate correction is required.

Claim Objections

5. Applicant's response to the objections to the claims in the previous Office Action (mailed on 26 September 2006) is noted and appreciated. Applicant responded by amending the claims. Applicant's amendments to the claims overcome most of the objections. However, some issues remain. These issues are addressed in the rejections under 35 U.S.C. 112 below.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 7-10** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 7-8 (included in the subsequent dependent claims 9-10), notice the following limitation:

"wherein the shutoff of the passing-through light and the added light is performed by closing a shutter disposed on the input side of the transmitting amplifier *of each of the plurality of WDM transmission equipment*" (emphasis Examiner's).

This limitation implies that **multiple** shutters are closed in the "shutting off" step. However, Applicant's disclosure does not appear to show the closing of multiple shutters in one "shutting off" step. Rather, Applicant's Fig. 7 shows the closing of one shutter disposed on the input side of the transmitting amplifier **in the preceding station**. That is, Fig. 7 shows the closing of *one* shutter in *one* station, not

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the shutter disposed in *each* of a plurality of WDM transmission equipment/stations. As a remedy, Examiner respectfully suggests amending the claim language so that “the transmitting amplifier of each of the plurality of WDM transmission equipment” is changed to -- “the transmitting amplifier in the preceding station”.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 1-12** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-2 (included in the subsequent dependent claims 3-12), notice the “being shifted” limitation. The usage of the phrase “being shifting” is awkward since it is unclear what exactly is being shifted. That is, the language reads that “the WDM transmission equipment...being shifted to receive an optical signal”. However, WDM transmission equipment “being shifted” is unclear. For example, such unclear language could suggest that the location of the WDM transmission equipment is “being shifted” or that the WDM transmission equipment is “being shifted” to another WDM transmission equipment. However, the specification appears to suggest that the **operational state/mode** of the WDM transmission equipment is being shifted to another **operational state/mode**. Examiner respectfully suggests amending the claim language to clarify what exactly is being shifted. As another suggestion, Applicant may consider amending the language to read as follows: “the WDM transmission equipment...being **prepared** to receive an optical signal”.

In claims 1-2 (included in the subsequent dependent claims 3-12), notice the “being switched over” limitation. The usage of the phrase “being switched over” is awkward since it is unclear what exactly is being switched over. That is, the language reads that “the WDM transmission equipment...being switched over to optical signal output”. However, WDM transmission equipment “being switched over” is unclear. That is, “switching over” transmission equipment to a signal output does not make clear technical sense. However, the specification appears to suggest that the **output** of the WDM transmission equipment is being switched to **output an optical signal**. Examiner respectfully suggests amending the claim language to clarify what exactly is being switched over.

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Appropriate correction is required.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. **Claims 1-12** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 14 of Horachi et al. (U.S. Patent No. 7,002,734 B2, hereinafter “Horachi”). Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention(s) of the claims of the instant application is an obvious variation(s) of the invention(s) of the patent.

Regarding claim 1, claim 14 of Horachi discloses:

In a network constituted with a multi-stage connection of a wavelength division multiplex (WDM) transmission equipment (ring network with multiple nodes in col. 17, l. 49-50, 66) having a receiving amplifier amplifying a WDM signal received from a preceding station (col. 17, l. 48-49, “pre-amplifier”), and a transmitting amplifier outputting a WDM signal to a succeeding station (col. 17, l. 49, “post-amplifier”), a gain setting method for the receiving amplifier comprising:

detecting the necessity of gain setting of the receiving amplifier (implied detecting in “when the gain setting of a pre-amplifier is necessary” in col. 20, l. 7-8),

requesting WDM transmission equipment in the preceding station to output ASE light (ASE light output request at the previous node in col. 20, l. 6);

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in the WDM transmission equipment of the preceding station (previous node in col. 20, l. 7), based on the request for ASE light output, shutting off both passing-through light and added light (block through light and add light in col. 18, l. 17), and outputting the ASE light corresponding to a predetermined number of wavelengths of signal light (ASE light in col. 17, l. 62-63);

in the receiving amplifier of the WDM transmission equipment in the station of interest, performing the gain setting by use of the ASE light (gain setting in col. 20, l. 20-21); and

on completion of the gain setting ("thereafter shifting" in col. 20, l. 24-25), in the WDM transmission equipment of the station of interest, shifting to receive an optical signal (opening the WDM shutter in col. 20, l. 30-31 will result in the reception of an optical signal), and in the WDM transmission equipment of the preceding station, switching over to optical signal output (the post-amplifier shifting in col. 20, l. 30).

Claim 14 of Horachi does not expressly disclose:

"a **plurality** of WDM transmission equipment, **each** having a receiving amplifier amplifying a WDM signal received from a preceding station, and a transmitting amplifier outputting a WDM signal to a succeeding station".

Rather, claim 14 of Horachi discloses a ring network with at least one node with the receiving amplifier (col. 17, l. 48-49, "pre-amplifier") and the transmitting amplifier (col. 17, l. 49, "post-amplifier"). However, the nodes of ring networks are generally identical in basic structure with each other. Accordingly, an obvious variation of the network of Horachi would include a plurality of nodes with the **plurality** of WDM transmission equipment.

Claim 14 of Horachi does not expressly disclose:

detecting the necessity of gain setting of the receiving amplifier **when the power of the receiving amplifier is turned on**.

However, the performing of any variety of methods and steps when a device is turned on is standard practice in the art as part of standard initialization processes. Accordingly, an obvious variation

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of the network of Horachi would include this detecting step during a standard initialization process ***when the power of the receiving amplifier is turned on.***

Regarding claim 2, consider claim 14 of Horachi. Claim 2 of the instant application largely corresponds to claim 1 of the instant application. Claim 2 differs from claim 1 in the following limitation:

detecting the necessity of gain setting of the receiving amplifier ***at the time of either restoration from a break or replacement of the fiber connecting the WDM transmission equipment sets.***

However, the performing of any variety of methods and steps when a device must be reinitialized after a restoration from a break or replacement of fiber is standard practice in the art as part of standard re-initialization processes. Accordingly, an obvious variation of the network of Horachi would include this detecting step during a standard re-initialization process ***at the time of either restoration from a break or replacement of the fiber connecting the WDM transmission equipment sets.***

Regarding claims 3-4, claim 14 of Horachi discloses:

wherein the ASE light corresponding to the predetermined number of wavelengths of the signal light of ASE light corresponding to one wavelength of the signal light (notice that the wavelength number in claim 14 of Horachi is “n”, col. 17, l. 63, which includes the scope of one wavelength).

Regarding claims 5-6, claim 14 of Horachi does not expressly disclose the “network element” that overall controls equipment and detects the necessity of the gain setting of the receiving amplifier. However, such network elements are standard in the art for controlling the overall operation of equipment in a node. Additionally, claim 14 of Horachi implies the existence of some means for determining “when the gain setting of a pre-amplifier is necessary” (col. 20, l. 7-8). A network element that provides overall control of equipment in a node of Horachi is an obvious choice for the means for detecting the necessity of the gain setting of the receiving amplifier since such a network element would coordinate the control of the other components for actually implementing the gain setting.

Regarding claims 7-8, claim 14 of Horachi discloses the “shutter” (col. 18, l. 17).

Regarding claims 9-10, claim 14 of Horachi does not expressly disclose:

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wherein, when outputting the ASE light, the transmitting amplifier in the preceding station supervises a condition of the shutter disposed on the input side of the transmitting amplifier, and on occurrence of a malfunction, the malfunction is reported to a maintenance person.

However, such supervision and response to a malfunction is standard and obvious practice in the art for troubleshooting various components in an apparatus or system.

Regarding claims 11-12, claim 14 of Horachi discloses:

wherein, in the WDM transmission equipment of the station of interest, a stable condition of the ASE light output of the transmitting amplifier in the preceding station is supervised (col. 20, l. 13-24).

Claim 14 of Horachi does not expressly disclose:

on detection of an unstable condition of the transmitting amplifier in the preceding station while the gain setting of the receiving amplifier is being performed in the station of interest, the gain setting of the receiving amplifier in the station of interest is canceled, and after detecting a stable condition of the ASE light output of the transmitting amplifier in the preceding station, the gain setting of the receiving amplifier in the station of interest is performed afresh.

However, such limitations read on the standard and obvious practice of re-starting a process when there is an undesirable situation.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Kim whose telephone number is 571-272-3033. The examiner can normally be reached on Mon.-Fri. 9 AM to 5 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth N. Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

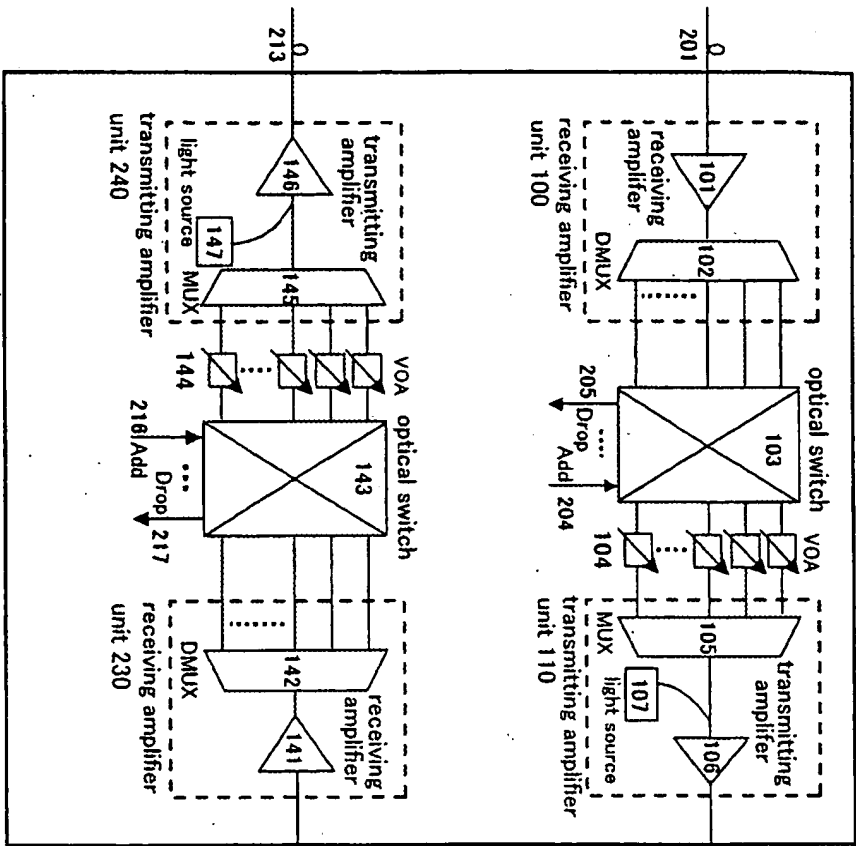
DSK

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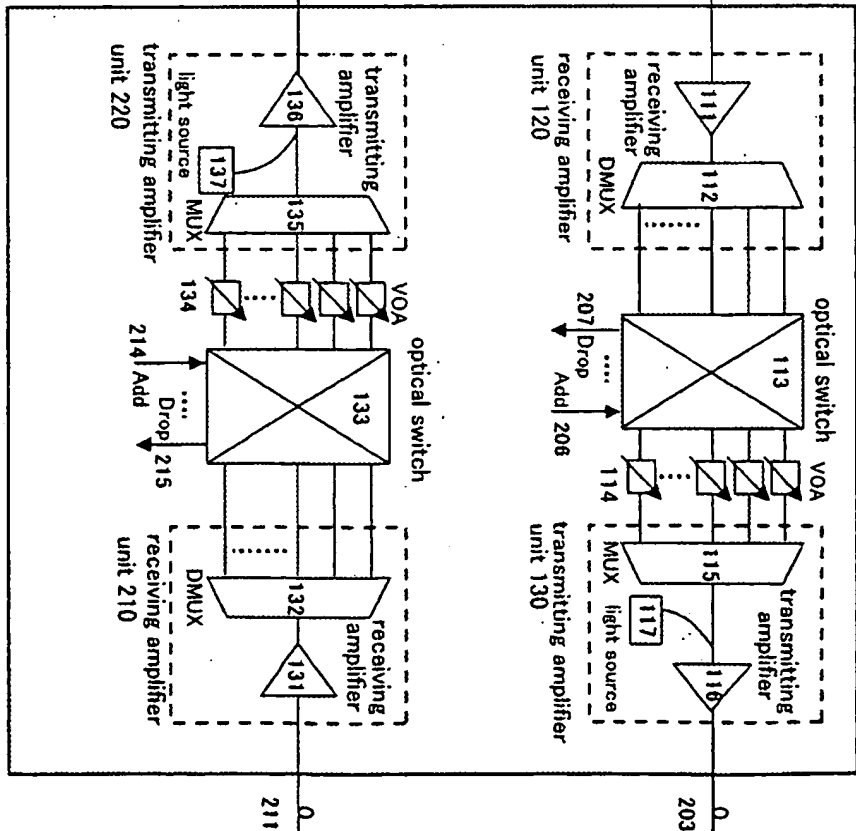
REPLACEMENT FIGURE

Fig. 1 PRIOR ART

<Station A>



<Station B>



REPLACEMENT FIGURE

Approved by DSK
20 FEBRUARY 2007

Fig. 10

